

Abstract

Method for providing frequency-hopping OFDMA using symbols of comb patter, the method including the steps of:

5    a) assigning frequency domain signal  $X(k)$  of comb pattern (comb symbol,  $k$  is frequency index) to modulated data sequence, the comb symbol comprising predetermined number of sub carriers (sub carrier group) which are placed with predetermined interval in the whole available frequency  
10 band; b) getting the comb symbol hopped for the comb symbol to have independent frequency offset; and c) inverse fast fourier transforming the comb symbol to time domain signal  $x(n)$  ( $n$  is time index) and transmitting the signal.